

*Site File
17.1*



March 23, 1992

*Also Include in
A.R. under
ATSDR
3/23/92*

Anne Duffy
Public Health Advisor
Department of Health
Hazardous Waste Section
Airdustrial Center, Building 4
P.O. Box 47825
Olympia, WA 98504-7825

**Subject: South Tacoma Field Superfund Site
Phase I Soil Investigation Report**

Dear Anne:

Thank you for reviewing the above-referenced report and for providing your summary on soil contaminants of potential health concern in your January 21, 1992, letter. I appreciate the care with which you reviewed the report.

EPA recently completed screening the surface soil sample results to identify the chemicals of concern that would be evaluated in the risk assessment. Enclosed is a document that lists the criteria used for selecting chemicals of concern in surface soils and air. Also enclosed is a table that lists the chemicals retained as chemicals of concern to be evaluated in the risk assessment. For your information, I am also enclosing the EPA Region 10 Supplemental Risk Assessment Guidance for Superfund. It describes the methodology for calculating risk-based concentrations that were used to screen for chemicals of concern. Also enclosed is a table that compares the chemicals of potential health concern you identified in your January 21, 1992, to those selected as chemicals of concern to be evaluated in the EPA risk assessment. Not included in this list are the dioxins and furans, which are being retained for evaluation in the risk assessment, and which are being treated separately at this time.

Not all the chemicals that you initially identified as chemicals of potential health concern were retained in the list of chemicals of concern to be evaluated in the risk assessment. The criteria applied to screening the chemicals removed a number from further consideration.

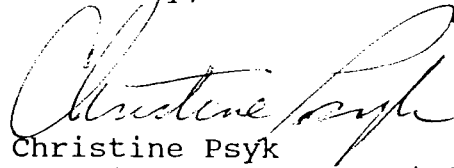
I trust the enclosed materials adequately explain the methodology and criteria used to select chemicals of concern. These methodology and criteria may account for the differences between the initial list of chemicals of potential health concern identified in your letter and EPA's screened list of chemicals of concern.

*Orig.
1021411
1021173*

At this time, we are developing criteria to be used in the selection of chemicals of concern for groundwater. I will provide you with a list once it has been developed. In addition, I will provide you and Gregg Thomas with the draft Remedial Investigation Report, which is due to be completed by August 24, 1992.

Should you have any questions or concerns regarding these materials and the status of the project, please call me at 553-6519.

Sincerely,

A handwritten signature in cursive script, appearing to read "Christine Psyk".

Christine Psyk
EPA Site Manager

Enclosures

cc: Kevin Oates, EPA Superfund
Gregg Thomas, ATSDR

POTENTIAL CHEMICALS OF CONCERN IN SURFACE SOILS
AT THE SOUTH TACOMA FIELD SITE (REVISED 3/13/92)

SITE-WIDE

Aluminum*
Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Manganese
Mercury
Zinc
PAHs, carcinogenic^a
PCBs

* EPA toxicity
parameters not
available

Dismantling Yard

Aluminum
Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Mercury
Zinc
PCBs
PAHs, carcinogenic^a

TIP Management

PAHs, carcinogenic^a

BY AREA

Airport

Aluminum
Arsenic
Cadmium
Chromium
Lead
Mercury
PAHs, carcinogenic^a

Railyard

Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Mercury
PCBs
PAHs, carcinogenic^a

Amsted

Aluminum
Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Manganese
Mercury
Zinc
PAHs, carcinogenic^a

Former Swamp/Lake

Arsenic
Beryllium
Cadmium
Chromium
PAHs, carcinogenic^a

^a Carcinogenic PAHs: Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, and Dibenzo(a,h)anthracene.

POTENTIAL CHEMICALS OF CONCERN IN AIR
AT THE SOUTH TACOMA FIELD SITE (REVISED 3/13/92)

SITE-WIDE

Arsenic
Beryllium
Cadmium
Chromium
Manganese
Mercury
PAHs, carcinogenic^a

BY AREA

Dismantling Yard

Arsenic
Beryllium
Cadmium
Chromium
Mercury
PAHs, carcinogenic^a

Airport

Arsenic
Beryllium
Cadmium
Chromium
Mercury
PAHs, carcinogenic^a

Railyard

Arsenic
Beryllium
Cadmium
Chromium
Mercury
PAHs, carcinogenic^a

TIP Management

PAHs, carcinogenic^a

Amsted

Arsenic
Beryllium
Cadmium
Chromium
Manganese
Mercury
PAHs, carcinogenic^a

Former Swamp/Lake

Arsenic
Beryllium
Cadmium
Chromium
PAHs, carcinogenic^a

^a Carcinogenic PAHs: Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, and Dibenzo(a,h)anthracene.

**COMPARISON OF CHEMICALS SELECTED
BY DOH AND ICF AS CHEMICALS OF CONCERN IN
SURFACE SOILS AT THE SOUTH TACOMA FIELD SITE.^{a,b}**

Chemical	Department of Health		ICF		Comments
	Maximum Detected Concentration	Chemical of Concern ?	Maximum Detected Concentration	Chemical of Concern ?	
VOLATILE ORGANIC CHEMICALS (UG/KG):					
Benzene	12	YES	12	No	Only 3 detects; all below RBSL ^c of 2,000.
Chloroform	36	YES	36	No	Only 2 detects; both below RBSL of 10,000.
Tetrachloroethylene	J 5	YES	J 5	No	Only 1 detect; below RBSL of 1,000.
Trichloroethylene	J 9	YES	J 9	No	Only 1 detect; RBSL of 6,000.
SEMIVOLATILE ORGANIC CHEMICALS (UG/KG):					
Bis(2-ethylhexyl)phthalate	J 1,300	YES	J4 4,200	No	All detects below RBSL of 5,000.
Carcinogenic PAHs	20,000	?	9,900 (20,000) ^d	YES	Above RBSL of 6.
PESTICIDES/PCBs (UG/KG):					
PCBs	1254--42,000	No	1254--42,000	YES, for class	> 5% detections over RBSL of 8.
	1260--1,000	YES	1260--1,000	YES, for class	Only 3 detects; Dismantling Yard-350 and 440; Railyard- 1,000.
Dieldrin	33	YES	33	No	Only 1 detect; above RBSL of 4.

COMPARISON OF CHEMICALS SELECTED
BY DOH AND ICF AS CHEMICALS OF CONCERN IN
SURFACE SOILS AT THE SOUTH TACOMA FIELD SITE.^{a,b} (Continued)

Chemical	Department of Health		ICF		Comments
	Maximum Detected Concentration	Chemical of Concern ?	Maximum Detected Concentration	Chemical of Concern ?	
INORGANIC CHEMICALS (MG/KG):					
Aluminum	E/J4 104,000	No	E/J4 104,00	YES	No RBSL with which to compare; all detects except maximum detect are within 2X background.
Antimony	53.2	YES	N/J4 491 (Sample #911)	YES	Agreement.
Arsenic	395	YES	696 (Sample #547)	YES	Agreement.
Beryllium	* 14.4	YES	* 14.4	YES	Agreement.
Cadmium	29.4	YES	N/J4 29.9 (Sample #426)	YES	Agreement.
Chromium	501	YES	E/N 707 (Sample #399)	YES	Agreement.
Cobalt	135	No	135	NO	Agreement.
Copper	3/J4 163,000	No	E/J4 163,000	YES	Found well above RBSL of 2,000 in Dismantling yard, Railyard, and Amsted. Also well above maximum background of 34.
Lead	*/J4 118,000	YES	*/J4 118,000	YES	Agreement.
Manganese	*/J4 21,800	YES	*/J4 21,800	YES	Agreement.
Mercury	5.3	No	5.3	YES	No RBSL with which to compare; above maximum background value (0.24) in Dismantling Yard, Railyard, Amsted, and to a lesser extent at Airport.

**COMPARISON OF CHEMICALS SELECTED
BY DOH AND ICF AS CHEMICALS OF CONCERN IN
SURFACE SOILS AT THE SOUTH TACOMA FIELD SITE.^{a,b} (Continued)**

Chemical	Department of Health		ICF		Comments
	Maximum Detected Concentration	Chemical of Concern ?	Maximum Detected Concentration	Chemical of Concern ?	
Selenium	141	YES	141	No	Only 1 detect (141); within 2X RBSL of 100.
Vanadium	170	YES	N 321 (Sample #880)	No	Only 3 detects above RBSL of 200: Swamp-321, 321, and 301 mg/kg; all within 2X RBSL.
Zinc	61,600	No	61,600	YES	RBSL=5,000; Above RBSL in Dismantling Yard, Railyard, and Amsted.

^a Chemicals omitted from this list were considered by both parties not to be of concern.

^b Data qualifier "J" indicates estimated value; "J4" indicates estimated value, quality control outside control limits, bias not readily determined; "E" indicates estimated value due to interference; "N" indicates spiked sample recovery not within control limits; "*" indicates duplicate analysis not within control limits.

^c Risk-based screening level (RBSL) is a concentration equivalent to a 10^{-7} risk for carcinogens or an HI=0.1 for noncarcinogens, assuming reasonable maximum exposure parameters under a residential scenario for ingestion of surface soils, as discussed EPA's Region 10 Supplemental Risk Assessment Guidance for Superfund (August 16, 1991).

^d Highest detected value from PAH analysis in Semivolatile file is 20,000 ug/kg.